

TRANSLATION OF PRIORITY DOCUMENT OF CN02145253.9

SEQUENCE LISTING

<110> SHANGHAI INSTITUTES FOR BIOLOGICAL SCIENCES, CAS

<120> METHOD OF DIAGNOSING AND TREATING BALDNESS USING HUMAN AND MOUSE RHOR GENE AND CODED PRODUCT THEREOF

<130> 026816

<160> 14

<170> PatentIn version 3.1

<210> 1

<211> 2484

<212> DNA

<213> Mus musculus

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<221> CDS

<222> (1)..(2481)

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Ser Arg Leu Gln Ser Arg Lys Pro Pro Asn Leu Ser Ile Thr Ile Pro	
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cca cca gag agc cag gcc ccc ggc gag cag gat agc atg ctt cct gag	144
Pro Pro Glu Ser Gln Ala Pro Gly Glu Gln Asp Ser Met Leu Pro Glu	
35 40 45	
agg cgc aag aac cca gcc tac ctg aag agt gtc agc cta cag gag ccc	192
Arg Arg Lys Asn Pro Ala Tyr Leu Lys Ser Val Ser Leu Gln Glu Pro	
50 55 60	
cgg gga cga tgg cag gag ggc gca gag aag cgc ccc ggc ttc cgc cgc	240
Arg Gly Arg Trp Gln Glu Gly Ala Glu Lys Arg Pro Gly Phe Arg Arg	
65 70 75 80	
cag gcc tcc ctg tcc cag agc atc cgc aag agc aca gcc cag tgg ttt	288
Gln Ala Ser Leu Ser Gln Ser Ile Arg Lys Ser Thr Ala Gln Trp Phe	
85 90 95	
ggg gtc agc ggc gac tgg gag ggc aag cga caa aac tgg cat cgt cgc	336
Gly Val Ser Gly Asp Trp Glu Gly Lys Arg Gln Asn Trp His Arg Arg	
100 105 110	
agc ctg cac cac tgc agc gtg cac tat ggc cgc ctc aag gcc tcg tgc	384
Ser Leu His His Cys Ser Val His Tyr Gly Arg Leu Lys Ala Ser Cys	
115 120 125	
cag aga gaa ctg gag ctg ccc agc cag gag gtg cca tcc ttc cag ggc	432
Gln Arg Glu Leu Glu Leu Pro Ser Gln Glu Val Pro Ser Phe Gln Gly	
130 135 140	
act gag tct cca aaa ccg tgc aag atg ccc aag att gtg gat cca ctg	480
Thr Glu Ser Pro Lys Pro Cys Lys Met Pro Lys Ile Val Asp Pro Leu	
145 150 155 160	
gct cgg ggt agg gcc ttc cgc cat cca gat gag gtg gac cgg cct cac	528
Ala Arg Gly Arg Ala Phe Arg His Pro Asp Glu Val Asp Arg Pro His	
165 170 175	
gct gcc cac cca cct ctg act cca ggg gtc ctg tct ctc aca tcc ttc	576
Ala Ala His Pro Pro Leu Thr Pro Gly Val Leu Ser Leu Thr Ser Phe	

TRANSLATION OF PRIORITY DOCUMENT OF CN02145253.9

acc agt gtc	180	cgc tct ggc	185	tac tcc cat ctg	190	ccc cgc cgc aag agg ata	624
Thr Ser Val Arg		Ser Gly Tyr Ser		His Leu Pro Arg		Arg Arg Lys Arg Ile	
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tct gtt gcc		cat atg agc		ttt cag gca gcc		gcc ctc ctc aag ggg	672
Ser Val Ala His		Met Ser Phe		Gln Ala Ala Ala		Ala Leu Leu Lys Gly	
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cgt tcc gtg		cta gat gcg		act ggg cag		cgg tgc cgg cat gtc	720
Arg Ser Val Leu		Asp Ala Thr		Gly Gln Arg Cys		Arg His Val Lys Arg	
225		230		235		240	
agc ttc gct		tac ccc agc		ttc ctg gag		gag gat gct gtc	768
Ser Phe Ala Tyr		Pro Ser Phe		Leu Glu Glu Asp		Ala Val Asp Gly Ala	
245		250		255			
gac acc ttc		gac tcc tcc		ttt ttt agt		aag gaa gaa atg	816
Asp Thr Phe Asp		Ser Ser Phe		Phe Ser Lys		Glu Glu Met Ser	
260		265		270			
cct gac gat		gtc ttt gag		tcc ccc cca		ctc tct gcc	864
Pro Asp Asp Val		Phe Glu Ser		Pro Pro Leu		Ser Ala Ser Tyr	
275		280		285			
ggg gtc cca		cac tct gcc		tcc ccg gtc		tcc ccg gat gga	912
Gly Val Pro His		Ser Ala Ser		Pro Pro Val		Ser Pro Asp Gly	
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Pro Leu Lys Glu		Tyr Ser Gly		Gly Arg Ala Leu		Gly Pro Gly Thr	
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cgt ggc aaa		cgc att gcc		tcc aaa gta		aag cac ttt gca	1008
Arg Gly Lys Arg		Ile Ala Ser		Lys Val Lys		His Phe Ala Phe	
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Lys Lys Arg His		Tyr Gly Leu		Gly Val Val		Gly Asn Trp Leu	
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Ser Tyr Arg Arg		Ser Ile Ser		Thr Val Gln		Arg Gln Leu Glu	
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Phe Asp Ser His		Arg Pro Tyr		Phe Thr Tyr		Trp Leu Thr Phe	
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Ile Ile Ile Thr		Leu Leu Val		Ile Cys Thr		Tyr Gly Ile Ala	
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Gly Phe Ala Gln		His Val Thr		Thr Gln Leu		Val Leu Lys Asn	
405		410		415			
gtg tat gag		agc gtg aag		tac atc cag		cag gag aac ttc	1296
Val Tyr Glu Ser		Val Lys Tyr		Ile Gln Gln		Glu Asn Phe Trp	
420		425		430			
ccc agc tcg		att gac ctc		att cac ctg		gga gca aag ttc	1344
Pro Ser Ser Ile		Asp Leu Ile		His Leu Gly		Ala Lys Phe Ser	
435		440		445			
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Ile Arg Lys Asp		Gln Gln Ile		Glu Gln Leu		Val Arg Arg Glu	
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att gag cgc		acc tct ggc		tgc tgt gtc		cag aat gac	1440
Ile Glu Arg Thr		Ser Gly Cys		Cys Val Gln		Asn Asp Arg Ser	
465		470		475		480	
atc cag acc		ctg aag gac		tgc tcg gag		act tta gcc	1488
Ile Gln Thr Leu		Lys Lys Asp		Cys Ser Glu		Thr Leu Ala Thr	
485		490		495			
aag tgg cag		aat gat act		ggg ccc tca		gac aag tct	1536
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TRANSLATION OF PRIORITY DOCUMENT OF CN02145253.9

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Glu	Pro	Ala	Ser	Ser	Gly	Ala	His	Ile	Trp	Pro	Asp	Asp	Ile	Thr	Lys	
	530					535					540					
tgg	ccg	atc	tgc	aca	gag	cag	gct	cag	agc	aac	cac	acg	ggc	ttg	ttg	1680
Trp	Pro	Ile	Cys	Thr	Glu	Gln	Ala	Gln	Ser	Asn	His	Thr	Gly	Leu	Leu	
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cac	ata	gac	tgt	aag	atc	aaa	ggc	cgc	ccc	tgc	tgc	atc	ggc	acc	aag	1728
His	Ile	Asp	Cys	Lys	Ile	Lys	Gly	Arg	Pro	Cys	Cys	Ile	Gly	Thr	Lys	
			565						570				575			
ggc	agc	tgc	gag	atc	acc	act	cgg	gag	tac	tgt	gag	ttc	atg	cat	ggc	1776
Gly	Ser	Cys	Glu	Ile	Thr	Thr	Arg	Glu	Tyr	Cys	Glu	Phe	Met	His	Gly	
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tat	ttc	cat	gaa	gac	gcg	acg	ctg	tgt	tcc	cag	gtg	cac	tgt	tta	gac	1824
Tyr	Phe	His	Glu	Asp	Ala	Thr	Leu	Cys	Ser	Gln	Val	His	Cys	Leu	Asp	
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Cys	Leu	Val	Ser	Val	Val	Phe	Gln	Met	Thr	Ile	Leu	Arg	Asp	Leu	Glu	
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Lys	Leu	Ala	Gly	Trp	His	Arg	Ile	Ser	Ile	Ile	Phe	Ile	Leu	Ser	Gly	
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ttc	aac	ctg	tgc	gcc	att	gtg	ctt	ttc	ctc	ttc	atc	tgt	ggc	ctc	ctg	2208
Phe	Asn	Leu	Ser	Ala	Ile	Val	Leu	Phe	Leu	Phe	Ile	Cys	Gly	Leu	Leu	
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Pro	Trp	Ile	Asp	Asn	Ile	Ala	His	Ile	Phe	Gly	Phe	Leu	Ser	Gly	Met	
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ctt	ctg	gcc	ttc	gcc	ttc	ctg	cct	tac	att	acc	ttc	ggc	acc	agc	gac	2304
Leu	Leu	Ala	Phe	Ala	Phe	Leu	Pro	Tyr	Ile	Thr	Phe	Gly	Thr	Ser	Asp	
		755						760				765				
aag	tac	cgc	aag	cga	gcc	ctc	atc	ctc	gtg	tgc	ctg	ctg	gtc	ttt	gct	2352
Lys	Tyr	Arg	Lys	Arg	Ala	Leu	Ile	Leu	Val	Ser	Leu	Leu	Val	Phe	Ala	
	770					775					780					
ggg	ctc	ttt	gct	tcc	ctg	gtg	ctg	tgg	ctg	tac	atc	tac	ccc	atc	aac	2400
Gly	Leu	Phe	Ala	Ser	Leu	Val	Leu	Trp	Leu	Tyr	Ile	Tyr	Pro	Ile	Asn	
785					790					795				800		
tgg	ccc	tgg	atc	gag	tac	ctc	acc	tgc	ttt	ccc	ttc	acc	agc	cgc	ttc	2448
Trp	Pro	Trp	Ile	Glu	Tyr	Leu	Thr	Cys	Phe	Pro	Phe	Thr	Ser	Arg	Phe	
			805						810					815		

TRANSLATION OF PRIORITY DOCUMENT OF CN02145253.9

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820 825

2484

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35 40 45
Arg Arg Lys Asn Pro Ala Tyr Leu Lys Ser Val Ser Leu Gln Glu Pro
50 55 60
Arg Gly Arg Trp Gln Glu Gly Ala Glu Lys Arg Pro Gly Phe Arg Arg
65 70 75 80
Gln Ala Ser Leu Ser Gln Ser Ile Arg Lys Ser Thr Ala Gln Trp Phe
85 90 95
Gly Val Ser Gly Asp Trp Glu Gly Lys Arg Gln Asn Trp His Arg Arg
100 105 110
Ser Leu His His Cys Ser Val His Tyr Gly Arg Leu Lys Ala Ser Cys
115 120 125
Gln Arg Glu Leu Glu Leu Pro Ser Gln Glu Val Pro Ser Phe Gln Gly
130 135 140
Thr Glu Ser Pro Lys Pro Cys Lys Met Pro Lys Ile Val Asp Pro Leu
145 150 155 160
Ala Arg Gly Arg Ala Phe Arg His Pro Asp Glu Val Asp Arg Pro His
165 170 175
Ala Ala His Pro Pro Leu Thr Pro Gly Val Leu Ser Leu Thr Ser Phe
180 185 190
Thr Ser Val Arg Ser Gly Tyr Ser His Leu Pro Arg Arg Lys Arg Ile
195 200 205
Ser Val Ala His Met Ser Phe Gln Ala Ala Ala Leu Leu Lys Gly
210 215 220
Arg Ser Val Leu Asp Ala Thr Gly Gln Arg Cys Arg His Val Lys Arg
225 230 235 240
Ser Phe Ala Tyr Pro Ser Phe Leu Glu Glu Asp Ala Val Asp Gly Ala
245 250 255
Asp Thr Phe Asp Ser Ser Phe Phe Ser Lys Glu Glu Met Ser Ser Met
260 265 270
Pro Asp Asp Val Phe Glu Ser Pro Pro Leu Ser Ala Ser Tyr Phe Arg
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Gly Val Pro His Ser Ala Ser Pro Val Ser Pro Asp Gly Val His Ile
290 295 300
Pro Leu Lys Glu Tyr Ser Gly Gly Arg Ala Leu Gly Pro Gly Thr Gln
305 310 315 320
Arg Gly Lys Arg Ile Ala Ser Lys Val Lys His Phe Ala Phe Asp Arg
325 330 335
Lys Lys Arg His Tyr Gly Leu Gly Val Val Gly Asn Trp Leu Asn Arg
340 345 350
Ser Tyr Arg Arg Ser Ile Ser Ser Thr Val Gln Arg Gln Leu Glu Ser
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Phe Asp Ser His Arg Pro Tyr Phe Thr Tyr Trp Leu Thr Phe Val His
370 375 380

TRANSLATION OF PRIORITY DOCUMENT OF CN02145253.9

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Val	Tyr	Glu	Ser	Val	Lys	Tyr	Ile	Gln	Gln	Glu	Asn	Phe	Trp	Ile	Gly
				420					425						430
Pro	Ser	Ser	Ile	Asp	Leu	Ile	His	Leu	Gly	Ala	Lys	Phe	Ser	Pro	Cys
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				450											460
Ile	Glu	Arg	Thr	Ser	Gly	Cys	Cys	Val	Gln	Asn	Asp	Arg	Ser	Gly	Cys
465					470						475				480
Ile	Gln	Thr	Leu	Lys	Lys	Asp	Cys	Ser	Glu	Thr	Leu	Ala	Thr	Phe	Val
					485					490					495
Lys	Trp	Gln	Asn	Asp	Thr	Gly	Pro	Ser	Asp	Lys	Ser	Asp	Leu	Ser	Gln
				500					505						510
Lys	Gln	Pro	Ser	Ala	Val	Val	Cys	His	Gln	Asp	Pro	Arg	Thr	Cys	Glu
				515					520						525
Glu	Pro	Ala	Ser	Ser	Gly	Ala	His	Ile	Trp	Pro	Asp	Asp	Ile	Thr	Lys
				530					535						540
Trp	Pro	Ile	Cys	Thr	Glu	Gln	Ala	Gln	Ser	Asn	His	Thr	Gly	Leu	Leu
545						550					555				560
His	Ile	Asp	Cys	Lys	Ile	Lys	Gly	Arg	Pro	Cys	Cys	Ile	Gly	Thr	Lys
				565						570					575
Gly	Ser	Cys	Glu	Ile	Thr	Thr	Arg	Glu	Tyr	Cys	Glu	Phe	Met	His	Gly
				580					585						590
Tyr	Phe	His	Glu	Asp	Ala	Thr	Leu	Cys	Ser	Gln	Val	His	Cys	Leu	Asp
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Lys	Val	Cys	Gly	Leu	Leu	Pro	Phe	Leu	Asn	Pro	Glu	Val	Pro	Asp	Gln
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Phe	Tyr	Arg	Ile	Trp	Leu	Ser	Leu	Phe	Leu	His	Ala	Gly	Ile	Val	His
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Cys	Leu	Val	Ser	Val	Val	Phe	Gln	Met	Thr	Ile	Leu	Arg	Asp	Leu	Glu
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Lys	Leu	Ala	Gly	Trp	His	Arg	Ile	Ser	Ile	Ile	Phe	Ile	Leu	Ser	Gly
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Ile	Thr	Gly	Asn	Leu	Ala	Ser	Ala	Ile	Phe	Leu	Pro	Tyr	Arg	Ala	Glu
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Val	Gly	Pro	Ala	Gly	Ser	Gln	Phe	Gly	Leu	Leu	Ala	Cys	Leu	Phe	Val
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Phe	Asn	Leu	Ser	Ala	Ile	Val	Leu	Phe	Leu	Phe	Ile	Cys	Gly	Leu	Leu
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Pro	Trp	Ile	Asp	Asn	Ile	Ala	His	Ile	Phe	Gly	Phe	Leu	Ser	Gly	Met
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Leu	Leu	Ala	Phe	Ala	Phe	Leu	Pro	Tyr	Ile	Thr	Phe	Gly	Thr	Ser	Asp
				755					760						765
Lys	Tyr	Arg	Lys	Arg	Ala	Leu	Ile	Leu	Val	Ser	Leu	Leu	Val	Phe	Ala
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Gly	Leu	Phe	Ala	Ser	Leu	Val	Leu	Trp	Leu	Tyr	Ile	Tyr	Pro	Ile	Asn
785						790					795				800
Trp	Pro	Trp	Ile	Glu	Tyr	Leu	Thr	Cys	Phe	Pro	Phe	Thr	Ser	Arg	Phe
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TRANSLATION OF PRIORITY DOCUMENT OF CN02145253.9

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 ccagtgggtt ggggtcagcg gcgactggga gggcaagcga caaaactggc atcgtcgcag 180
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 gcccaagatt gtggatccac tggctcgggg tagggccttc cgccatccag atgaggtgga 360
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 catgtccgct ctggctactc ccactctccc cggcgcaaga ggatatctgt tgcccatatg 480
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TRANSLATION OF PRIORITY DOCUMENT OF CN02145253.9

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cgccgccctc ctcaaggggc gttccgtgct agatgcgact gggcagcggt gccggcatgt 540
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